REMARKS

Claims 13-16 have been amended.

The Applicant believes the language in prior claims 13 – 16, before the current amendment, have the equivalent meaning to that language which the Examiner quotes from the Applicant's specification. In the interest of furthering the prosecution of this patent application, however, the claims 13-16 have been amended to rely on exact language from the specification.

The present invention teaches the use of a display requiring little electrical power. It teaches, also, as a consequence, a smaller, lighter weight electrical energy source (i.e., battery).

Both BAIRD (US. 911,363) and SALVO (US. 4,097,855)teach a bulky, energy-consuming unit. BAIRD teaches a "stadium wall" mounted apparatus which is heavy and not portable. Salvo teaches an apparatus which utilizes LED's which are relatively high energy consumers requiring continuous consumption of electrical energy.

The structure in the present invention is different from SALVO. LED's (light emitting diodes) tend to overheat and to require too much power for a portable unit. The present invention's electromagnetic FLIP DISK displays have a high contrast/high visibility, but only utilize power when they are being flipped, i.e., the score is being changed.

One may not just take a claimed invention and dissect into prior art. Many inventions make use of prior art in combinations.

> . "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination." *In Re Geiger*, 815 F.2d 686, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987)

The Federal Circuit decision in *Chiuminatta Concrete Concepts v. Cardinal Indus.*, 145 F.3d 1303, 1998, 46 U.S.P.Q.2d 1752 (Fed. Cir. May 14, 1998) teaches that a functionally same structure must also be structurally same to infringe. Similarly, A functionally same display (e.g., BAIRD' scoreboard) may be patently different and not read on a claim of a structurally-different (e.g., electromagnetic/electromechanical flip disk display of the present invention).

"...the court must compare the accused structure with the disclosed structure, and must find equivalent structure as well as identity of claimed function for that structure..." *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F2d 931, 934, USPQ2d 1737, 1739 Fed. Cir. 1987) (en banc) quoted in *Chiuminatta Concrete Concepts v. Cardinal Indus.*, 145 F.3d 1303, 1998, 46 U.S.P.Q.2d 1752 (Fed. Cir. May 14, 1998).

If the present invention would have been obvious to one of ordinary skill in the arts, one might ask why it was not included in SALVO (filed 1977, granted 1978) since BAIRD (filed 1908, granted 1909) predates SALVO. One may conclude that the present invention (filed 2000, provisional filed 1999) fulfills a need for an extremely low electrical energy consumption which had been unmet for about 22 years.

Significant differences with SALVO include (1) the present invention has a different display, with significantly overall lower apparatus weight and significantly less electrical energy usage; (2) the present invention does not require near simultaneous pressing of scoring keys by both players. It should be noted that what might otherwise be considered a lesser difference, when affecting commercial success, may be the difference between success and none. For example, requiring two separate players to input the same information, almost simultaneously, may enjoin commercial success.

BAIRD teaches the use of large metal plates with a plain (unnumbered) side and a side with a number. BAIRD teaches that a metal plate can be rotated into a visible position. The energy source is gravity by way of the conversion of potential energy of a descending weigh transmitted to a metal plate actuating mechanism. BAIRD does not teach any electronic mechanism to handle, for example, to handle "deuce" scoring situations as

arise in the game of tennis. BAIRD has no electronic remote control. BAIRD teaches a "stadium wall" mounted apparatus. The BAIRD control is a heavy duty (non-portable) "Morse code" style wired- in "buttons" or keys. Both BAIRD and SALVO teach a relatively bulky and relatively heavy, relatively high energy-consuming unit.

. Some basic patents relating to FLIP DISK technology include US Patent No. 4,380,879 and US Patent No. 4,577,427 (Brown, filed 1984, issued 1986). It would appear that BAIRD might be used against these patents as to obviousness, if it were to be used against the present invention, which utilizes the prior art of BROWN etc. as a subset of the present invention.. BAIRD is specifically used against the present invention (with SALVO) as to the prior art of BROWN, etc. In view of the number of subsequent patents issued in this area of art such as: US 4,380,879; US 4, 577,427; US 6,216, 370 (TIJANIC, issued 2001); US 6,220,723 (FREEMAN, ET AL., issued), etc., it is unlikely that BAIRD could be considered as making this area of art obvious.

The structure in the present invention is different from BAIRD (1909). This invention's Electromagnetic FLIP DISK displays, intrinsically, have a high contrast/high visibility, but only, intrinsically, utilize power when they are being flipped, i.e., the score is being changed. The present invention has a very low power consumption scoreboard, with consequent very low weight (more portability).

Many prior attempts at tennis scoreboards by others have not achieved any commercial viability because they haven't solved this key problem of portability and stand-alone operation over considerable time which the current inventors have achieved with utilizing flip disk displays to lower their intrinsic power requirements.

According to the Federal Circuit:

> Evidence of secondary considerations may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not. It is to be considered as part of all the evidence, not just when the decisionmaker remains in doubt after reviewing the art

Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1538-40, 218 USPQ 871, 879 (Fed. Cir. 1983)

> Thus when differences that may appear technologically minor nonetheless have a practical impact, particularly in a crowded field, the decision maker must consider the obviousness of the new structure in this light. Such objective indicia as commercial success, or filling an existing need, illuminate the technological and commercial environment of the inventor and aid in understanding the state of the art at the time the invention was made.

Continental Can Co.USA v. Monsanto Co., 948 F.2d 1264, 20 USPQ 2d 1746 1752 (Fed. Cir.1991)

In order to be a commercially viable portable scoreboard, a portable tennis scoreboard needs to operate for a long time on battery power, without requiring heavy-weight batteries. The present invention has (1) an electromagnetic/electromechanical display which requires a small amount of electrical energy, and only when the display is flipped. This is also called a low "duty" cycle because the electrical energy is only required when the display is "on duty", i.e., changing its display indications.

In order to be a commercially viable portable scoreboard, it needs to operate for a long time on battery power, without requiring heavy-weight batteries. The present invention has (1) an electromagnetic/electromechanical display which requires a small amount of electrical energy, and only when the display is flipped. This is also called a low "duty" cycle because the electrical energy is only required when the display is on changing "duty",

As further indication, U. S. Patent No.s 6,220,723 (2001, Freeman, et al.), and 6,216,370 (2001, Tijanic) show the "flip disks" under consideration in this invention as something quite different from BAIRD (1909, U. S. Patent No. 911,363)

The structure here is different from BAIRD (1909). This invention's Electromagnetic FLIP DISK displays, intrinsically, have a high contrast/high visibility, but only, intrinsically, utilize power when they are being flipped, i.e., the score is being changed.

Many prior attempts at tennis scoreboards by others have not achieved any commercial success because they haven't solved this key problem of portability and stand-alone operation over considerable time which the current inventors have achieved with utilizing flip disk displays to lower their intrinsic power requirements.

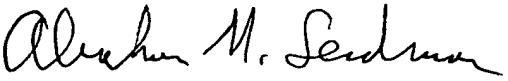
Therefore it is believed that Claims 13-16 are in a condition for allowance.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles County, California telephone number (310) 766-6348 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

Date: September 3, 2004

By: 

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

13 (Twice amended) A portable remotely controlled tennis scoreboard with a display, an electronics unit, at least one remote control unit which may change a displayed score, a power source, comprising :

a display selected from the group consisting of [electromechanical flip assemblies and] electromagnetic flip disk[s] assemblies; [whereby]

said display having [has] high visibility in bright sunlight ambient light conditions, [and,]

said display having [has] a low, irregular, intermittent electrical energy [power] consumption wherein the display consumes electrical energy only when activated to change a displayed score; and,

said electronics unit capable of computing tennis scores for all tennis scoring situations wherein input to said display is from said at least one remote control unit sending an electromagnetic signal from a sending antenna on said at least one control unit and said electromagnetic signal received by a receiving antenna electrically connected to said electronics unit.

14. (Twice amended) The portable remotely controlled tennis scoreboard of claim 13 wherein the power source is at least one battery.,[said battery not limited as to type, said battery requirements matched to the extent of electrical power consumption of the intrinsic intermittent duty cycle of the display.]

15. (Twice amended) A method for making a portable remotely controlled tennis scoreboard utilizing a display, an electronics unit, at least one remote control unit which may change a displayed score, utilizing a power source, comprising the steps of:

(a) selecting a display from the group consisting of [electromechanical flip assemblies and] electromagnetic flip disk[s] assemblies;

(b) utilizing said display wherein [whereby] said display has high visibility in bright sunlight ambient light conditions; [and]

(c) utilizing said display [whereby said display has] having a low [, irregular,] electrical energy [power] consumption [intermittent duty cycle] wherein [whereby] the display consumes electrical energy[power] only when activated to change a displayed score[.]; and

(d) selecting said electronics unit wherein said electronics unit has the capability to compute tennis scores for all tennis scoring situations wherein input to said display is from said at least one remote control unit sending an electromagnetic signal from a sending antenna on said at least one control unit and said electromagnetic signal received by a receiving antenna electrically connected to said electronics unit.

16. (Twice amended) The method for making a portable remotely controlled tennis scoreboard of claim 15 comprising the step of utilizing at least one battery for the power source. [; wherein said battery is not limited as to type, except as to the requirement to supply power to the extent of low electrical power consumption of the intermittent duty cycle of the display, with some low level consumption for the electronics unit and some low level battery drain loss when the tennis scoreboard unit is turned off.]

Many prior attempts at tennis scoreboards by others have not achieved any commercial success because they haven't solved this key problem of portability and stand-alone operation over considerable time which the current inventors have achieved with utilizing flip disk displays to lower their intrinsic power requirements.

Therefore it is believed that Claims 13-16 are in a condition for allowance.

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